

Work Order ID 155821

Wednesday, January 18, 2017 7:40:19 AM

155821

U/R

OK 1/17/23

Page 1

Item ID: D4095-051 Accept *N900040100* Setup Start *NS1*
Revision ID: Stop *NS2*
Item Name: Wearpad Fwd
Start Date: 1/20/2017 Start Qty: 4.00 *4* Cust Item ID:
Required Date: 1/26/2017 Req'd Qty: 4.00 *4* Customer:
Reference:

Approvals: Process Plan: DAS 21 Date: JAN 23 2017 Tooling: _____ Date: _____
QC: 9-89 Date: _____ SPC (Y/N): _____ Date: _____
Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4095	C								

100 0.00
100 FLOW WATER JET
Waterjet Memo 0.02
FLOW CNC Waterjet 1-Cut as per Dwg (D4095-11)
Dwg Rev: C
Prog Rev: C
2-Deburr if necessary
④ 17/01/24

110 0.00
110 QC2- Inspect parts off machine FAI/FAIB
QC Memo 0.01
Quality Control
④ 17/01/24

120 0.00
120 QC8- Inspect parts - second check
QC Memo 0.01
Quality Control
④ 17/01/24
DAS 38 9-89
JAN 25 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Work Order ID 155821***155821***

Page 2

Wednesday, January 18, 2017 7:40:19 AM

Item ID: D4095-051 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Wearpad Fwd
Start Date: 1/20/2017 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 1/26/2017 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: Date: Tooling: Date: Run Start ***NR1***
QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Brake NC Brake NC	Form as per dwg NC BRAKE Memo	0.00 0.01			DAS 30 9-89	④			JAN 26 2017
140 *140* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.01				4			DAS 38 9-89 JAN 27 2017
150 *150* HandFinish Hand Finishing	Memo COAT ENTIRE TOP (CONCAVE) SURFACE WITH ROCKGUARD AS PER DWG A/R ROCKGUARD BATCH: 136205	0.00 0.05				4			MS 17.01.27

DQA: _____ Date: _____



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Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Work Order ID 155821

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155821

Page 3

Item ID: D4095-051 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Wearpad Fwd
Start Date: 1/20/2017 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 1/26/2017 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 *160* QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.01				<u>4</u>			 JAN 30 2017
170 *170* Packaging Packaging	Identify as per dwg & Stock Location: <u>FP-001</u> Memo LOCATION : FP001	0.00 0.01				<u>4</u>	<u>4</u>	<u>98</u>	<u>17/01/30</u>
180 *180* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.07							<u>17/02/01</u> 


JAN 30 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Picklist Print

Tuesday, January 17, 2017 1:20:38 PM

Page 1

Work Order ID: 155821

155821

Parent Item: D4095-051

D4095-051

Parent Item Name: Wearpad Fwd

Start Date: 1/20/2017

Required Date: 1/26/2017

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP rev.A 11.11.07 new issue EC verified by:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S16GA		Purchased	No				sf	73.0700		0.78			

M304S16GA

304/316 Sheet .063

01/17/2017

Location

Loc Qty

Loc Code

MAT010

73.07

m134604

5

m136036

34.97

m136327

33.1

9

DQA: _____ Date: _____

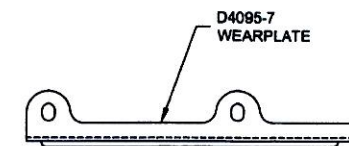


WORK ORDER NON-CONFORMANCE / UPDATE

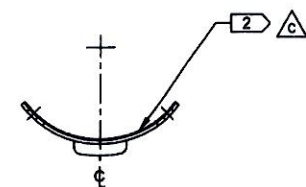
QA Closed: _____ Date: _____

Work Order update only ☐

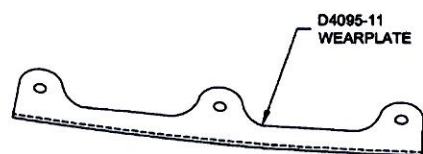
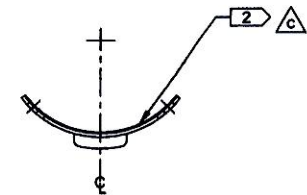
Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		FAULT CATEGORY Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐ OTHER : ☐			



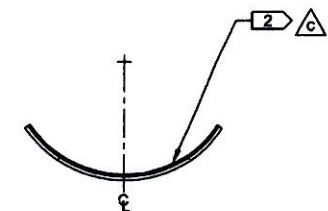
D4095-047 WEAR PAD ASSEMBLY



D4095-049 WEAR PAD ASSEMBLY



D4095-051 WEARPAD ASSEMBLY



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

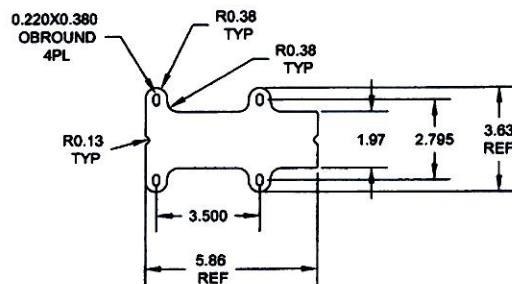
NO. 155821 M5
17-01-23

UNDER REVIEW

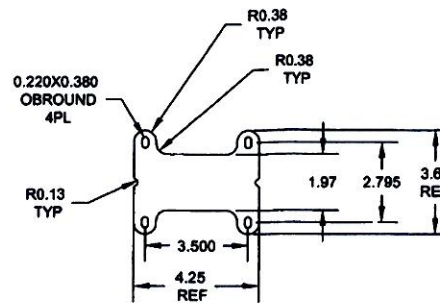
URF 16-572 ML
16.05.03

RELEASED
2016-01-11

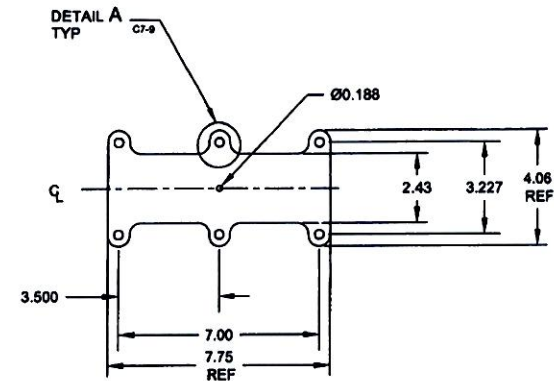
DESIGN	J	DART AEROSPACE USA, INC	
DRAWN	JP	EUGENE, OR	
CHECKED	JPSS	DRAWING NO.	REV. C
MFG. APPR.	A	D4095	SHEET 3 OF 9
APPROVED	JP	TITLE	SCALE
DE APPR.	JP	WEARPLATE	NTS
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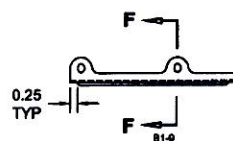
D4095-7F FLAT PATTERN 1



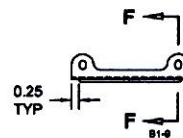
D4095-9F FLAT PATTERN 1



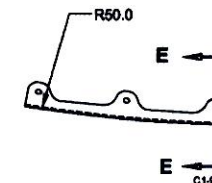
D4095-11F FLAT PATTERN 1



D4095-7 LONGITUDINAL BEND
(MADE FROM D4095-7F)



D4095-9 LONGITUDINAL BEND
(MADE FROM D4095-9F)



D4095-11 BENDING DETAIL
(MAKE FROM D4095-11F)

D4095-7/-9/-11 NOTES:

- 1) MATERIAL: AISI 304/316 SS SHEET ANNEALED 2B FINISH, 16 GAUGE (0.063 THICK) PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316), OR ASTM A240 OR ASME SA240 REF DART MATERIAL SPEC M304S18GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: N/A
- 8) WELDING: BUILDUP HARD SURFACING 0.17 TO 0.20 THICK USING 8259 ROD PER QSI 004 SECTION 4.5
- 9) PARTS ARE SYMMETRIC ABOUT CENTERLINE

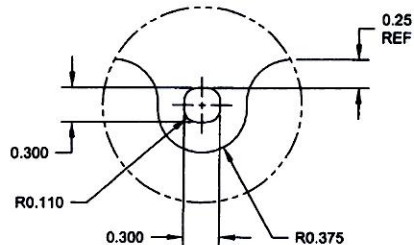
UNDER REVIEW

URF 16-572 ML
16.05.03

RELEASED
2016-01-11

DESIGN		DART AEROSPACE USA, INC
DRAWN		EUGENE, OR
CHECKED		DRAWING NO. REV. C
MFG. APPR.		D4095 SHEET 8 OF 9
APPROVED		TITLE SCALE
DE APPR.		WEARPLATE NTS
DATE	16.01.06	

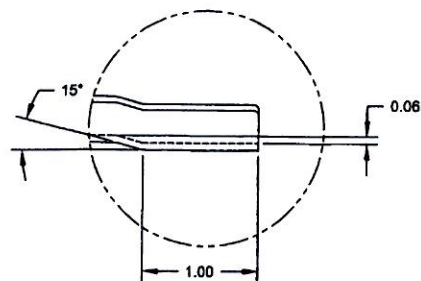
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DETAIL A: TAB DETAIL

SCALE 4X

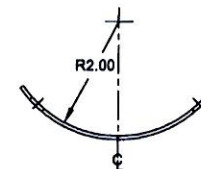
C3-3
C6-5
D3-7
D2-8



DETAIL B: JOGGLE DETAIL

SCALE 4X

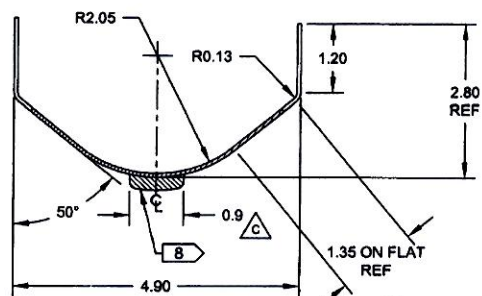
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B6-4
B3-5
B2-7



SECTION E-E

SCALE 2X

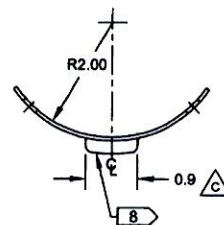
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SECTION C-C

SCALE 2X

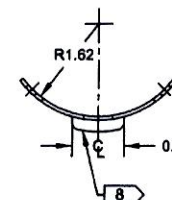
B5-4
B4-5



SECTION D-D

SCALE 2X

B4-4
B5-5



SECTION F-F

SCALE 2X

B6-8
B7-8

UNDER REVIEW

URF 16-572 ML

16.05.03

RELEASE
2016-01-11

DESIGN		DART AEROSPACE USA, INC	
DRAWN		EUGENE, OR	
CHECKED	ASS	DRAWING NO.	REV. C
MFG. APPR.		D4095	SHEET 9 OF 9
APPROVED		TITLE	SCALE
DE APPR.		WEARPLATE	NTS
DATE	16.01.06	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON OR ENTITY WITHOUT PERMISSION FROM DART AEROSPACE USA, INC.	